

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended)      A controller of an A.C. generator for vehicles, comprising:  
a switching element inserted in series in a field coil of an A.C. generator for  
intermittently controlling a field current supplied to the field coil in accordance with an output  
voltage from the A.C. generator; and

conduction rate control means for detecting a rotational speed of the A.C.  
generator to control a conduction rate of the switching element in accordance with an increase in  
rotational speed,

wherein the conduction rate control means comprises:

an f-V converter that obtains a voltage through f-V conversion by converting a  
frequency proportional to the rotational speed of the A.C. generator into a voltage;

a comparator for controlling the conduction rate of the switching element in  
accordance with a magnitude relationship between a level of the voltage obtained through the f-  
V conversion and a variable reference level.

Claim 2 (canceled)

3. (currently amended): A controller of an A.C. generator for vehicles according to claim 21, wherein the conduction rate control means further comprises temperature detection means for detecting a temperature of a predetermined position of the A.C. generator, and the temperature detection means, when a detected temperature is equal to or higher than a predetermined temperature, operates the f-V converter.

4. (original) A controller of an A.C. generator for vehicles according to claim 3, wherein the temperature detection means comprises a thermosensitive semiconductor element.

5. (original) A controller of an A.C. generator for vehicles according to claim 3, wherein the temperature detection means comprises a thermosensitive resistance element having a positive resistance temperature coefficient.

6. (original) A controller of an A.C. generator for vehicles according to claim 3, wherein the temperature detection means comprises a thermosensitive resistance element having a negative resistance temperature coefficient.